1   **What Is Claimed Is:**

1   1.   A symmetry database system for a data processing

2   system, comprising:

3   a data source for storing source data;

4   a data preparation platform to filter the source data into

5   a symmetry data source; and

6   a plurality of process engines to fetch data from the

7   symmetry data source and generate results according

8   to the data.

1   2.   The symmetry database system as claimed in claim 1

2   wherein the data source comprises a plurality of databases, the

3   symmetry   data   source   comprises   a   plurality   of   symmetry

4   databases, and the data preparation platform filters data from

5   the   plurality   of   databases   into   corresponding   symmetry

6   databases.

1   3.   The symmetry database system as claimed in claim 2

2   wherein the filtering operation of the data preparation platform

3   is carried out by elements comprising:

4   logic for aligning data in the data source to link the

5   databases in the data source;

6   logic for nature-checking the aligned data; and

7   logic for checking the aligned data by applying business

8   rules of the process engines to filter the data that

9   does not pass the business rules, so as to generate

10   the symmetry data source.

1   4.   The symmetry database system as claimed in claim 3

2   wherein the filtering operation of the data preparation platform

3   is carried out by an element comprising logic for filtering the

4   aligned data using a flexible filter to generate the symmetry

5   data source.

6   5.   The symmetry database system as claimed in claim 3

7   wherein the data alignment operation of the data preparation

8   platform is carried out by elements comprising:

9   logic for listing primary keys of source tables in the data

10   source;

11   logic for finding popular items according to a frequency

12   of the primary keys in the source tables and the

13   business rules of the process engines; and

14   logic for finding at least one critical item from the

15   popular items, whereby the databases in the data

16   source can be linked using at least one the critical

17   item.

1   6.   The symmetry database system as claimed in claim 1

2   further comprising a plurality of data generators corresponding

3   to each process engine to fetch the data needed by each process

4   engine from the symmetry data source.

1   7.   The symmetry database system as claimed in claim 1

2   further comprising an application interface to provide users

3   with access to the data source in real time.

1   8.   The symmetry database system as claimed in claim 7

2   further comprising a monitor unit to monitor access of the data

3   source through the application interface, and notify

4   administrators or other responsible parties if a process engine

5   crashes or result errors occur.

1   9.   The symmetry database system as claimed in claim 8

2 wherein the monitor unit further identifies and repairs problems

3 corresponding to process engine crashes or result errors

4 according to the data source and the symmetry data source.

1   10.   The symmetry database system as claimed in claim 1

2 wherein the process engines are serial data process engines.

1   11. A symmetry database method for a data processing

2 system, comprising the steps of:

3   providing a data source for storing source data;

4   filtering the source data into a symmetry data source using

5   a data preparation platform; and

6   fetching data from the symmetry data source by a plurality

7   of process engines, and generating results according

8   thereto.

1   12.   The symmetry database method as claimed in claim 11

2 wherein the data source comprises a plurality of databases, the

3 symmetry data source comprises a plurality of symmetry

4 databases, and the data preparation platform filters data from

5   the plurality of databases into corresponding symmetry

6   databases.

1   13. The symmetry database method as claimed in claim 12

2   wherein the filtering method of the data preparation platform

3   comprises:

4   aligning data in the data source to link the databases in

5   the data source;

6   nature-checking the aligned data; and

7   checking the aligned data by applying business rules of the

8   process engines to filter the data that does not pass

9   the business rules, so as to generate the symmetry

10   data source.

1   14. The symmetry database method as claimed in claim 13

2   wherein the filtering method of the data preparation platform

3   further comprising filtering the aligned data using a flexible

4   filter to generate the symmetry data source.

5   15. The symmetry database method as claimed in claim 13

6   wherein the data alignment method of the data preparation

7   platform comprises:

8   listing primary keys of source tables in the data source;

9   finding popular items according to a frequency of the

10   primary keys in the source tables and the business

11   rules of the process engines; and

12   finding at least one critical item from the popular items,

13   by which the databases in the data source can be

14   linked.

1   16. The symmetry database method as claimed in claim 11

2   wherein the data needed by each process engine is fetched from

3   the symmetry data source by a corresponding data generator.

1   17. The symmetry database method as claimed in claim 11

2   further allowing users to access the data source in real time.

1   18. The symmetry database method as claimed in claim 17

2   further monitoring accesses of the data source in real time, and

3   notifying administrators or other responsible parties if a

4   process engine crashes or result errors occur.

1   19. The symmetry database method as claimed in claim 18

2   further identifying and repairing problems corresponding to

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3   process engine crashes or result errors according to the data

4   source and the symmetry data source.

1   20.   The symmetry database system as claimed in claim 11

2   wherein the process engines are serial data process engines.